

REMARKS/ARGUMENTS

Claims 1-46 are pending. Claims 1-46 have been rejected. Claims 1, 3-4, 7, 11-14, 16, 18-22, 31-34, 36, 38-40, and 43-44 have been amended. Reconsideration is respectfully requested.

Claims 1-5, 7-9, 11-13, 18-26, 31-33, 38, 39, and 42-46 have been rejected under 35 USC § 102(e) as being anticipated by *Urriola et al.* (U.S. Patent No. 6,779,946). Claims 6, 10, 14-17, 27-30, 34-37, 40, and 41 have been rejected under 35 USC § 103(a) as being unpatentable over *Urriola et al.*

Claim 1 has been amended to recite in pertinent part “the structural cells have openings sized to accept tree roots from a tree external to the structural cells and to accommodate natural growth of said tree roots within said structural cells.”

As understood, *Urriola et al.* at best merely disclose various drainage systems such as drainage systems for car ports as shown in Figures 18-20. In the car port shown in Figure 20, percolation tanks 57 are underground and wrapped in a geotextile 24. Sand 50 is disposed around and above the percolation tanks 57. The drainage cells 1 are disposed between the sand 50 and the percolation tanks 57. Filter soil is disposed on the sand 50. As shown in Figure 20, the car is parked on the filter soil 42. ('946 Patent, column 10, lines 44-59.) “Grass cells” 20 or “grass blocks” 43, which are not shown in Figure 20, are filled with filter soil 42 and include grass to form the car port surface. The features of the grass cells 20 or grass blocks 43 may be seen in Figures 18-19 or Figures 13-16, respectively. The “grass cell” 20 is shown in Figures 6-8 with grass growing within the cell 20. ('946 Patent, column 6, lines 43-57.) The geotextile 24 is not around the “grass cells” 20 of *Urriola et al.*

The grass cells 20 of *Urriola et al.* are not the structural cells having openings sized to accept tree roots from a tree external to the structural cells and to accommodate natural growth of said trees within said structural cells as recited in claim 1. Grass roots are very fine and can penetrate small spaces in compact sand soils. Grass roots do not damage hardscape, paving or other structures. In contrast, trees use very large soil volumes compared to grass plants, and

have much larger roots than grass plants. Further, tree roots are sensitive to soil compaction and have difficulty penetrating small compacted spaces between fine sand. *Urriola et al.* do not address problems with tree roots. In fact, applicant notes that *Urriola et al.* is silent with respect to tree root growth. As understood, *Urriola et al.* mention trees only in relation to the percolation tanks 57. (For example, see '946 Patent, column 10, lines 21, 32, and 55.) The references to roots within *Urriola et al.* are for vegetation, grass and turf and are not directed towards trees. (For example, see '946 Patent, column 1, line 31, column 3, lines 28 and 32, column 4, line 30, column 6, lines 62-65, column 7, line 22, line 48-51, and column 8, line 7.) Applicant notes that Figure 20 of *Urriola et al.* does show some tree root growth into the percolation tank 57; however, the percolation tank 57 is not the structural cells recited in claim 1, which recites "the structural cells having openings sized to accept tree roots from a tree external to the structural cells and to accommodate natural growth of said tree roots within said structural cells." The tree growth shown in the Figures of *Urriola et al.* is incidental and not a feature of the percolation tanks 57. Applicant also notes that the tree roots shown in Figure 20 grow downward in the sand 50 and not outward near the surface, and thus, are not natural growth of the roots within the structural cells. In contrast, the structural cells recited in claim 1 accommodate natural growth of tree roots within the structural cells.

Lacking at least this claim feature, *Urriola et al.* cannot render claim 1 unpatentable. Because claims 2-21 depend directly or indirectly on claim 1, for similar reasons *Urriola et al.* cannot render claims 2-21 unpatentable. Therefore, it is respectfully submitted that claims 1-21 are patentable over the references of record.

In addition Applicant makes further comments on some of these claims as follows.

Applicant further notes that *Urriola et al.* do not disclose low compacting tree rooting material as recited in claim 4. The citations to *Urriola et al.* in the Office Action are directed to drainage soil and not to low compacting tree rooting medium.

It is asserted in the Office Action that the "grass blocks" 43 and the drainage cells 1 shown in Figure 13 of the *Urriola et al.* are the structural cells positioned in two or more layers recited in claim 7. For the same reasons described above, the grass blocks 43 and the drainage cells 1 are not the structural cells recited in claim 1. Claim 7 has been amended to clarify that

the structural cells are positioned in two or more layers disposed on each other.

Claim 21 has been amended to recite in pertinent part “means for flushing the system with water to remove sediment or debris.” *Urriola et al.* do not disclose or even suggest such means for flushing the system with water to remove sediment or debris. Further, no portion of *Urriola et al.* is cited. Instead, it is asserted that *Urriola et al.* inherently teaches such means when the system is hit by heavy rains or hurricanes. Applicant submits that heavy rains or hurricanes add more sediment or debris to the system of *Urriola et al.* or in extreme cases, destroy the system of *Urriola et al.*

Turning now to the other independent claim rejected under *Urriola et al.* Claim 22 recites first, second, and third layers of structural cells with the first and third layer being capable of short term and long term water storage, respectively, and the second layer being capable of storing tree rooting medium for supporting normal growth of tree roots. It is asserted in the Office Action that the drainage cells 1, the top layer of percolation tanks 57, and a bottom layer of percolation tanks 57 are the first, second, third layers, respectively, recited in claim 22. There is no disclosure or suggestion that the percolation tanks of *Urriola et al.* are used for storing tree rooting medium for supporting the growth of tree roots. As noted above in conjunction with Claim 1, *Urriola et al.* is silent on tree rooting medium. Further, Figure 20 of *Urriola et al.* shows a geotextile 24 around the percolation tanks 57. This is not the first permeable barrier separating the first and second layers and the second permeable barrier separating the second and third layers as recited in claim 22.

Lacking at least this claim feature, *Urriola et al.* cannot render claim 22 unpatentable. Because claims 23-43 depend directly or indirectly on claim 22, *Urriola et al.* cannot render claims 23-43 unpatentable. Therefore, it is respectfully submitted that claims 22-43 are patentable over the references of record.

Claims 44-46 have been rejected under 35 USC § 102(p) as being anticipated by *Coffman* (U.S. Patent No. 6,277,274).

Claim 44 has been amended to recite in pertinent part “positioning a plurality of structural cells in layers around the opening and at least partially under the hardscape.”

As understood, *Coffman* at best, merely discloses a concrete container 81 that holds dirt for supporting a tree 83 and supports a grate opening 87 on top of the concrete box 81. The concrete box 81 is not below the roadway 89. In contrast, claim 44 recites positioning a plurality of structural cells and layers around the opening and at least partially under the hardscape. Claim 44 further recites that an opening and some of the structural cells proximate the opening are filled with tree rooting medium for supporting tree growth. In contrast, the concrete box 81 of *Coffman* limits the tree root growth to within the concrete box 81 to keep the roots from growing underneath the roadway 89. In contrast, the plurality of cell structures recited in claim 44 are at least partially under the hardscape. Further, the structural cells under the hardscape are filled with the tree rooting medium for supporting tree growth. Thus, the tree root growth is under the hardscape. *Coffman* does not disclose or even suggest such tree root growth.

Lacking at least this claim feature, *Coffman* cannot render claim 44 unpatentable. Because claims 45-46 depend on claim 44, for similar reasons *Coffman* cannot render claims 45-46 unpatentable. Therefore, it is respectfully submitted that claims 44-46 are patentable over the references of record.


For the foregoing reasons, it is respectfully submitted that the claims are in an allowable form, and action to that end is respectfully requested.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 07-1896, **referencing docket number 1040636-900301.**

Respectfully submitted,

DLA PIPER RUDNICK GRAY CARY USA LLP

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By: 
Edward B. Weller
Reg. No. 37,468

Attorneys for Applicant(s)

Edward B. Weller
DLA Piper Rudnick Gray Cary USA LLP
2000 University Avenue
East Palo Alto, CA 94303-2248
650-833-2436 (Direct)
650-833-2000 (Main)
650-833-2001 (Facsimile)
edward.weller@dlapiper.com